

## Immersion Heater

The esPRO® Immersion Heater series heats liquids at a constant temperature. They are ideal for use in the semiconductor, pharmaceutical, and biomedical industries. These compact heaters are designed to integrate easily into PVDF, PFA and quartz process tanks. They safely, evenly and efficiently heat acids, bases, DI water and other noncombustible liquids up to 180°C.

ULTRAPURE PFA (TEFLON®) WETTED SURFACES

RELIABLE HEATING OF HARSH CHEMICALS

EFFICIENT AND EVEN, CLEAN HEATING

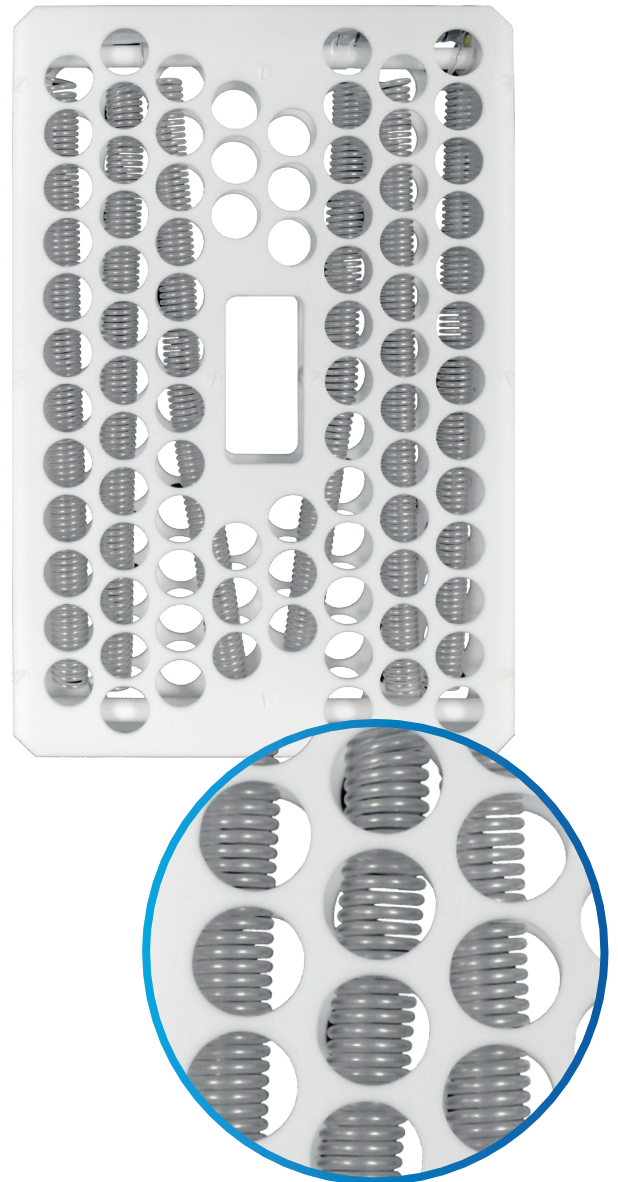
COMPACT DESIGN: MAXIMUM POWER IN A SMALL FOOTPRINT

SEMI S3 & CE COMPLIANT

LOW WATT DENSITY;  $\leq 4$  WATTS/IN<sup>2</sup>

GROUND WIRE WITH TANTALUM OR PLATINUM TIP

VARIOUS TYPES OF TEMPERATURE SENSORS AVAILABLE



The heat source is placed in the fluid to reduce heat loss. The heater's low mass and large surface area provide the fastest temperature response time. The system also offers the most comprehensive safety package with redundant interlocks that are integrated into every system. These rugged and durable heaters come in frame designs, with outputs of 1.0 to 40.0 kW. We can arrange a wide range of custom sizes, wattages, and voltages available, please contact us for all options!





### Features

- Ultrapure PFA (Teflon®) wetted surfaces
- Reliable heating of harsh chemicals
- Maximum 180°C heating capability
- Low Watt Density; ≤4 watts/in<sup>2</sup>
- Maximum power in compact footprint
- Heaters designed to customer specifications and process tank sizes for easy integration
- Over-temperature safety thermocouple on heater
- Ground wire with Tantalum or Platinum tip
- Perforated top and bottom floor grid as an option
- Available in several standard models, as well as custom builds. Contact us for all options!

### Standard configurations

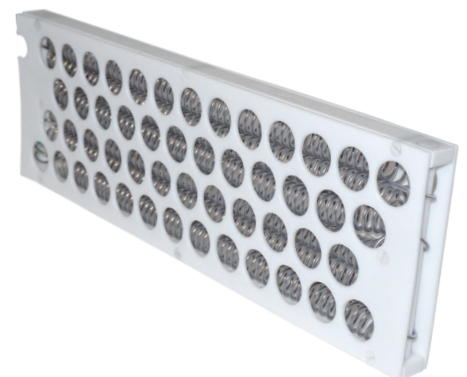
PRODUCT NUMBER	SUITABLE FOR PROCESS TANK SIZE	LENGTH (MM)	WIDTH (MM)	KW	VAC	AMPS
ESPRO-IH-R01-B-TJ-015-G1-040	1 x 4" cassette	180	180	1.5	230	6.52
ESPRO-IH-R01-B-TJ-030-G1-041	2 x 4" cassette	350	180	3.0	230	13.04
ESPRO-IH-R01-B-TJ-015-G1-042	1 x 6" cassette	180	220	1.5	230	6.52
ESPRO-IH-R01-B-TJ-030-G1-043	2 x 6" cassette	360	220	3.0	230	13.04
ESPRO-IH-R01-B-TJ-030-G1-046	1 x 8" cassette	250	280	3.0	230	13.04
ESPRO-IH-R01-B-TJ-050-K1-045	2 x 8" cassette	470	280	5.0	400	12.50

\* Custom builds and other voltages are also available. Please contact us for all options!

### Flexible and custom configurations

In addition to our standard configurations, the esPRO® Immersion Heaters are also available in custom builds to meet your requirements.

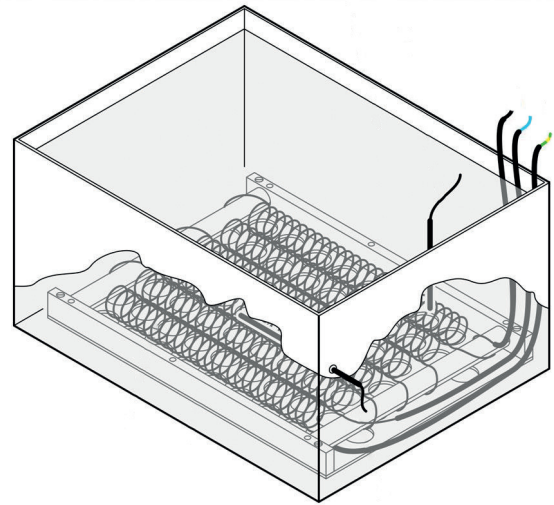
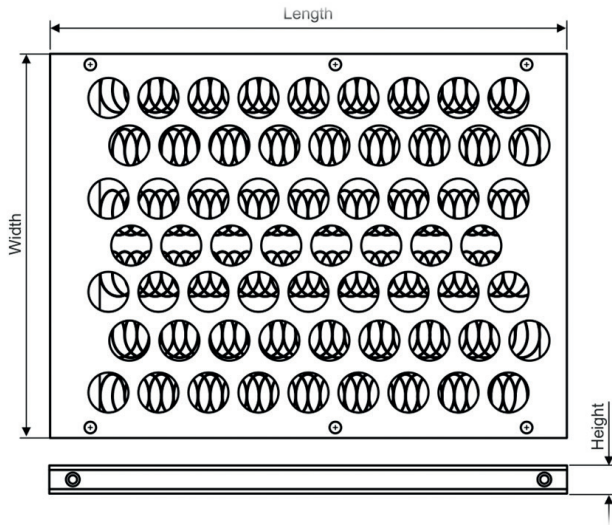
All our heaters are compatible with our quartz tanks, please also see our separate quartz tank datasheet.



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Technical drawings



The dimensions (length x width x height) of our Immersion Heater can be customized.